Amendments to the Specification:

Please replace paragraph [0005] with the following amended paragraph:

[0005] Currently, two operational modes are used by storage systems to copy the data to the back-up or secondary sites: synchronous mode and asynchronous mode. In synchronous mode, a write request from a host to the primary storage system completes only after write data are copied to the secondary storage system and acknowledge thereof has been made. Accordingly, this mode guarantees no loss of data at the secondary system since the write data from the host is stored in the cache of the primary system until the acknowledgement has be received from the secondary system. In addition, the primary volume (PVOL) in the primary storage system and the secondary volume (SVOL) in the secondary storage system are identically maintained, so that the SVOL can be [[used]] promptly used to replace the PVOL if the PVOL experiences failure. However, the primary and secondary storage systems cannot be placed too far apart, e.g., over 100 miles, under this mode . Otherwise, the storage system efficiently execute write requests from the host.

Please replace paragraph [0038] with the following amended paragraph:

[0038] The control data includes an index (IDX) [[211]] 211' that is an identifier for PVOL 111a from which journal data is derived, e.g., the unique number assigned for PVOL in the primary storage system 110a or in a journal group [[200]] 300a (Fig. 4). An address [[212]] 212' provides an offset address in the PVOL, from which the write data is written, e.g., starting logical block address (LBA) of the write data. A length [[213]] 213' provides the length of the write data, e.g., the number of logical blocks or total bytes of the write data. A time [[214]] 214' indicates the time when a host writes data to PVOL 111a . A sequence number (SEQ#) [[215]] 215' provides the sequence information of the write. That is, the sequence number provides write ordering within the primary storage system 110a. A JVOL identification (JVOL_ID) [[216]] 216' identifies the journal volume that contains corresponding journal data, e.g., a unique number assigned to the journal volume in primary storage system or in the journal group [[200]] 300a. A journal offset (JOFS) [[217]] 217' provides the offset address in the journal volume from which the journal data is stored or starting address of journal data. Alternatively, the control data may not include the JVOL_ID [[216]] 216' and JOFS [[217]] 217' since the control data is stored adjacent to the corresponding journal data.

Please replace paragraph [0039] with the following amended paragraph:

[0039] The intermediary storage system 110c maintains two pointers a first pointer (JOPTR) [[218]] 230 and a second pointer (JIPTR) [[219]] 240. JOPTR [[218]] 230 points to a journal that is to be sent to the remote storage system 110b. JIPTR [[219]] 240 points to an address to where next journal received from the primary system is to be stored. Accordingly, JIPTR [[219]] 240 should not get ahead of JOPTR [[218]] 230 to prevent new journals from overwriting the journals that have not yet been sent to the remote storage system 110b.